

NONPROVISIONAL APPLICATION FOR LETTERS PATENT  
UNITED STATES OF AMERICA

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10 Be it known that I, **DANIEL T. YOEST**, residing at **1525 Mt. McKinley Drive, Grayson, Georgia 30017**, a citizen of the United States, have invented certain new and useful improvements in a

15 **POWER CORD PLUG SECURING DEVICE**

20 of which the following is a specification.

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## POWER CORD PLUG SECURING DEVICE

### 5 CROSS-REFERENCE AND PRIORITY CLAIM TO RELATED APPLICATIONS

To the fullest extent permitted by law, the present non-provisional application claims priority to and the 10 benefit of provisional patent application entitled "Power Cord Plug Securing Device", filed on January 31, 2003, having assigned Serial No. 60/444,328.

### TECHNICAL FIELD

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The present invention relates, generally, to power cord accessories, and, more specifically, to a power cord plug securing device. The present invention is particularly suitable for, although not strictly limited 20 to, securely maintaining a power cord plug in electrically operative engagement with an electrical outlet.

### BACKGROUND OF THE INVENTION

25 Although necessary for the conveyance of electrical power to most electrical appliances and machinery, a common

power cord, and the associated plug head, can often present a multitude of inconveniences, and pose potentially hazardous conditions, when engaged with an electrical outlet.

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Specifically, an outlet-engaged power cord traversing a main walkway, such as a hallway, or the like, can easily become snarled or entangled around the legs of an inattentive passerby; thus, causing the forceful 10 dislodgement of the plug head from the electrical outlet. Forced removal of the plug head from the outlet in such a manner bears obvious ramifications, including damage to the plug prongs, unsheathing of the insulative wire covering proximal the plug head, and/or damage to the internal 15 components of the outlet socket itself. Such damage, thereby, increases the risk of electrical shock and circuit shortage.

Utilization of electrical extension cords, for 20 purposes of electrically engaging corded appliances or machines with inconveniently located or distant electrical outlets, present separate complications. In particular, as appliance power cords and extension cords, in general,

possess a finite length, the female plug head of an extension cord can become easily disengaged from the male plug head of the corded appliance when the appliance is being moved about, such as in the case of a vacuum cleaner, 5 or any electrically-powered garden tool. The obvious result of such power cord-extension cord disengagement is the immediate cessation of electrical power to the appliance; thereby, burdensomely requiring the operator of same to reengage the appliance power cord to the extension 10 cord for continued appliance operation.

Although plug removal prevention devices are known, such available devices possess clear disadvantages and limited functionality that make their use impractical, 15 problematic, and even aesthetically displeasing due to their bulky and conspicuous appearance. For instance, U.S. Patent 3,811,104 to Caldwell and U.S. Patent 4,105,274 to Casey both disclose safety devices for retaining plugs in electrical outlets, wherein the devices are generally rigid 20 bracket-like members that protrude substantially from the outlet cover plate. Although the devices of Caldwell '104 and Casey '274 may retain a plug within an outlet, the power cord is subject to being easily removed from the

generally U-shaped retaining troughs disclosed in both patents; thus, permitting the plug head to be jostled about, and potentially removed from the outlet should enough force be applied thereto. Additionally, neither 5 Caldwell '104 nor Casey '274 disclose devices capable of securely maintaining engagement of the female plug head of an extension cord to the male plug head of a corded appliance.

10 U.S. Patent 5,044,976 to Thompson discloses an electrical cord holding device that possesses a rigid first portion of a hook-and-loop fastening mechanism that protrudes from, and is secured to, a cover plate, and a reciprocal second portion of a hook-and-loop fastening 15 mechanism that is clamped onto a power cord, wherein the first and second portions of the hook-and-loop fastening mechanism are engageable to assist in retaining a plug within an outlet. As hook-and-loop fastening mechanisms are inherently removably affixable, however, little force 20 is required to remove the plug from an outlet if utilizing the Thompson '976 device. Moreover, as is consistent with the prior art, Thompson '976 also fails to disclose a device capable of securely maintaining engagement of the

female plug head of an extension cord to the male plug head of a corded appliance.

U.S. Patent 5,348,495 to Kasden discloses an electrical cord plug lock assembly that requires the application of a special electrical outlet cover plate that possesses locking brackets adapted to receive a clamp-like member secured to the power cord via bolts. Not only is the Kasden '495 device unduly burdensome and complex to apply, it requires the removal of an existing cover plate for application of a special cover plate, a seemingly unnecessary cost and inconvenience to the consumer. Additionally, Kasden '495 also fails to disclose a device capable of securely maintaining engagement of the female plug head of an extension cord to the male plug head of a corded appliance.

U.S. Patent 5,547,390 to Laherty also discloses an electrical plug securing device that requires the power cord to be intertwined between a series of retaining slots, an unnecessarily burdensome task, that hinders quick removal of the plug when desired. Additionally, the Laherty '390 device is, in large part, an aesthetically

displeasing device that undesirably draws attention to an otherwise inconspicuous electrical outlet. Furthermore, Laherty '390 also fails to disclose a device capable of securely maintaining engagement of the female plug head of 5 an extension cord to the male plug head of a corded appliance.

U.S. Patent 5,591,043 to Kenney discloses an electrical cord holding device that is applied over, and 10 fully superimposes, an electrical outlet, wherein wing-like flaps that protrude outwardly therefrom are folded inwardly, and a plug cord held therebetween via sliding the cord into retaining slots formed on the flaps. However, application of a sufficient pulling force would seemingly 15 cause disengagement of the power cord from the outlet. Moreover, as with the aforementioned prior art, the Kenney '043 device is conspicuously aesthetically displeasing, and further fails to disclose a device capable of securely 20 maintaining engagement of the female plug head of an extension cord to the male plug head of a corded appliance.

U.S. Patent 6,071,142 to Blackman also discloses a device for preventing plug removal from a wall outlet,

wherein the device utilizes suction-cups to maintain the plug within the outlet. As is common with any suction cup mechanism, however, the suction cups of the Blackman '142 device are only capable of withstanding a threshold amount 5 of pulling force before they become disengaged from the surface in which they were attached. Additionally, should the wall surface surrounding the outlet cover plate be substantially porous or possess a texture that does not permit airtight sealing of suction cups thereto, the 10 Blackman '142 device becomes ineffectual and impractical. Furthermore, as with the aforementioned prior art, Blackman '142 similarly fails to disclose a device capable of securely maintaining engagement of the female plug head of an extension cord to the male plug head of a corded 15 appliance.

Therefore, it is readily apparent that there is a need for a power cord plug securing device for securely maintaining a power cord plug in electrically operative 20 engagement with an electrical outlet and/or electrical extension cord, wherein the device can be easily applied to a pre-existing electrical outlet plate with minimal effort.

BRIEF SUMMARY OF THE INVENTION

Briefly described, in a preferred embodiment, the present invention overcomes the above-mentioned 5 disadvantages and meets the recognized need for such a device by providing a power cord plug securing device for securely maintaining a power cord plug in electrically operative engagement with an electrical outlet and/or electrical extension cord; thereby, eliminating forced 10 disengagement of same, and the resulting structural and functional damage to the power cord, plug head, and electrical outlet.

According to its major aspects and broadly stated, the 15 present invention in its preferred form is a power cord plug securing device having a securing strap and clasp member.

More specifically, the present invention, in its 20 preferred form, is a power cord plug securing device having a securing strap integrally formed with a substantially U-shaped clasp member. The securing strap preferably possesses a throughhole for receipt of a conventional

electrical outlet plate screw for fastening the securing strap to the face of the outlet plate, wherein the throughhole is preferably located on the securing strap at an end opposite of the clasp member. The clasp member is 5 adapted to engage and securely retain the portion of power cord located immediately aft of a plug head; thus, preventing accidental or forced removal of an electrically engaged plug head from an electrical outlet socket.

10 The present invention in an alternate form provides a power cord plug securing device having a securing strap integrally formed with two opposingly positioned clasp members, wherein application of such a device enables the sustained engagement of a female plug head to a male plug 15 head; thus, precluding accidental disconnection of same.

The present invention in another alternate form provides a power cord plug securing device having a securing strap integrally formed with two opposingly positioned clasp members. The securing strap preferably possesses a centrally disposed throughhole for receipt of a conventional electrical outlet plate screw for fastening the securing strap to the face of the outlet plate. Each 20

clasp member is adapted to engage and securely retain the portion of power cord located immediately aft of a plug head; thus, enabling the sustained engagement of two plug heads with a conventional dual-socket electrical outlet.

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Accordingly, a feature and advantage of the present invention is its ability to prevent accidental or forced removal of a plug head from an electrical outlet socket.

10 A feature and advantage of the present invention is its ability to enable the sustained engagement of a female plug head to a male plug head.

15 A feature and advantage of the present invention is its ability to enable the sustained engagement of two plug heads with a conventional dual-socket electrical outlet.

20 A feature and advantage of the present invention is its ability to prevent accidental or forced removal of a plug head from an electrical outlet socket; thus, reducing, or eliminating, damage to the plug prongs, unsheathing of the insulative wire covering proximal/aft the plug head, and/or damage to the internal components of the outlet

socket itself; and, thereby, significantly reducing the risk of electrical shock and/or circuit shortage typically associated therewith.

5       These and other features and advantages of the present invention will become more apparent to one skilled in the art from the following description and claims when read in light of the accompanying drawings.

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BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be better understood by reading the Detailed Description of the Preferred and Alternate Embodiments with reference to the accompanying drawing Figures, in which like reference numerals denote similar structures and refer to like elements throughout, and in which:

20       FIG. 1 is a perspective view of a power cord plug securing device according to a preferred embodiment of the present invention;

FIG. 2 is a perspective view of a power cord plug securing device according to a preferred embodiment of the present invention, shown in use;

5 FIG. 2A is a perspective view of a power cord plug securing device according to an alternate embodiment of the present invention;

10 FIG. 2B is a perspective view of a power cord plug securing device according to an alternate embodiment of the present invention;

15 FIG. 3 is a perspective view of a power cord plug securing device according to an alternate embodiment of the present invention;

FIG. 4 is a perspective view of a power cord plug securing device according to an alternate embodiment of the present invention, shown in use;

20 FIG. 5 is a perspective view of a power cord plug securing device according to an alternate embodiment of the present invention; and,

FIG. 6 is a perspective view of a power cord plug securing device according to an alternate embodiment of the present invention, shown in use.

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DETAILED DESCRIPTION OF THE PREFERRED  
AND ALTERNATIVE EMBODIMENTS

In describing the preferred and representative alternate embodiments of the present invention, as 10 illustrated in FIGS. 1-6, specific terminology is employed for the sake of clarity. The invention, however, is not intended to be limited to the specific terminology so selected, and it is to be understood that each specific element includes all technical equivalents that operate in 15 a similar manner to accomplish similar functions.

Referring now to FIGS. 1-2, the present invention in a preferred embodiment is a power cord plug securing device 10 possessing securing strap 20 preferably integrally 20 formed with clasp member 40. Preferably, device 10, in general, is formed from a durable plastic, or other suitable electrically non-conductive material, such as, for exemplary purposes only, rubber, polypropylene,

polyethylene, polyurethane, suitable polyolefins, ethylene-vinyl-acetate substrates, combinations thereof, and/or the like. Although securing strap 20 is preferably integrally formed with clasp member 40, it is contemplated that 5 securing strap 20 and clasp member 40 could be separately formed, and thereafter secured to one another via any suitable securing means known within the art, such as, for exemplary purposes only, hot melts, glues, epoxies, resins, permanent snap-fit mechanisms, rivets, fasteners, and/or 10 the like.

Preferably, clasp member 20 is integrally formed with end 22 of securing strap 20. Additionally, throughhole 26 is preferably located proximal to and formed through 15 opposing end 24 of securing strap 20. As best illustrated in FIG. 2, throughhole 26 is preferably adapted to receive conventional outlet cover plate screw S for securing device 10 to outlet cover plate CP. Preferably, securing strap 20 possesses a sufficient length to permit clasp member 40 to 20 securely engage the portion of power cord PC located immediately aft of plug head PH, when the electrical prongs or conductors of plug head PH are electrically engaged with

electrical outlet socket **ES** of outlet cover plate **CP**, as best illustrated in **FIG. 2**.

Preferably, clasp member **40** is substantially U-shaped, 5 possessing trough region **42** with retaining walls **44**, **46** extending therefrom, wherein retaining walls **44**, **46** preferably terminate in inwardly projecting ends **48**, **50**, respectively. Collaboratively, trough region **42**, retaining walls **44**, **46**, and ends **48**, **50**, yield a functionally 10 contoured clasp member **40** adapted to engage and retain power cord **PC** therewithin.

As best illustrated in **FIG. 2A**, although securing strap **20** preferably possesses throughhole **26** alone, it is 15 contemplated in an alternate embodiment that securing strap **20** could possess a plurality of throughholes **226** for purposes of selectively determining site of engagement of screw **S** therewith, and, thus, the site of engagement of clasp member **40** on power cord **PC**, as the useful length of 20 securing strap **20** is effected accordingly.

Additionally, and as best illustrated in **FIG. 2B**, it is contemplated in another alternate embodiment that trough

region 42, retaining walls 44, 46, and ends 48, 50 of clasp member 40 could be at least partially textured or ribbed R for increased frictional association with a power cord PC retained therein.

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Referring now more specifically to FIGS. 3-4, illustrated therein is an alternate embodiment of device 10, wherein the alternate embodiment of FIGS. 3-4 is substantially equivalent in form and function to that of 10 the preferred embodiment detailed and illustrated in FIGS. 1-2 except as hereinafter specifically referenced. Specifically, the embodiment of FIGS. 3-4 incorporates an additional clasp member 140 at end 24 of securing strap 20, and dispenses with throughhole 26. As best illustrated in 15 FIG. 4, the present alternate embodiment is particularly applicable in sustaining electrical engagement of a female plug head FPH of an extension cord or first power cord PC1, with male plug head MPH of a second power cord PC2, such as that from an appliance, or the like. Accordingly, securing 20 strap 20 of the present alternate embodiment possesses a sufficient length to permit clasp members 40, 140 to securely engage the portion of power cords PC1, PC2, respectively, located immediately aft of female plug head

**FPH** and male plug head **MPH**, respectively, when female plug head **FPH** and male plug head **MPH** are electrically engaged to one another, as best illustrated in **FIG. 4**.

5 Referring now more specifically to **FIGS. 5-6**, illustrated therein is an alternate embodiment of device 10, wherein the alternate embodiment of **FIGS. 5-6** is substantially equivalent in form and function to that of the preferred embodiment detailed and illustrated in **FIGS. 1-2** except as hereinafter specifically referenced. Specifically, the embodiment of **FIGS. 5-6** incorporates an additional clasp member 240 at end 124 of elongated securing strap 120, and replaces throughhole 26 with throughhole 126, centrally disposed on elongated securing 15 strap 120. As best illustrated in **FIG. 6**, throughhole 126 is adapted to receive screw **S** of conventional outlet cover plate **CP** for securing alternate device 10 thereto. As such, clasp member 40 is able to securely engage a first power cord **PC1** engaged with first electrical socket **ES1**, 20 and clasp member 240 is able to securely engage a second power cord **PC2** engaged with second electrical socket **ES2**. Additionally, securing strap 120 of the present alternate embodiment possesses a sufficient length to permit clasp

members 40, 240 to securely engage the portion of power cords PC1, PC2, respectively, located immediately aft of first plug head PH1 and second plug head PH2, respectively, when first plug head PH1 and second plug head PH2 are 5 electrically engaged with electrical sockets ES1, ES2, respectively, as best illustrated in FIG. 6.

Although FIGS. 2, 4, and 6 depict utilization of device 10 on standard power cords, it is contemplated that 10 device 10 could be utilized on any type of plug wire or cord-type current carrying member, such as, for exemplary purposes only, indoor/outdoor plug wires, industrial plugs, appliance plugs, telephone/LAN/WAN plug wires, cable wires, data cables, coaxial cables, and/or the like, without 15 limitation. Additionally, it is contemplated that device 10 could be utilized to retain the electrical prongs or conductors of any cord-type current carrying member in electrical engagement with any corresponding electrically conductive outlet or other suitable current carrying 20 member, such as, for exemplary purposes only, standard indoor/outdoor electrical outlets, industrial outlets, appliance outlets, telephone/LAN/WAN outlets, cable outlets, data outlets, coaxial cable outlets, and the like.

It is contemplated in an alternate embodiment that clasp members 40, 140 and/or 240, and securing straps 20 and/or 120 of device 10, of the respective preferred or alternate forms, could be selectively manufactured to any 5 desired size and/or from any desired material.

It is contemplated in an alternate embodiment that device 10, of either the preferred or alternate forms, could be manufactured to any desired size and/or from any 10 desired material.

It is contemplated in an alternate embodiment that device 10, of either the preferred or alternate forms, could be integrally formed with a conventional cover plate 15 CP.

It is contemplated in an alternate embodiment that device 10, of either the preferred or alternate forms, could be integrally formed with a plug head and/or plug 20 cord.

Having thus described exemplary embodiments of the present invention, it should be noted by those skilled in

the art that the within disclosures are exemplary only, and that various other alternatives, adaptations, and modifications may be made within the scope of the present invention. Accordingly, the present invention is not limited to the specific embodiments illustrated herein, but is limited only by the following claims.